No. 200500061

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pure Seed Testing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BENTGRASS, CREEPING

'PennLinks II'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twelfth day of December, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROCTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and The Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C 2426).

1. NAME OF OWNER	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME
Pure Seed Testing, Inc.	**PST-OVN**	**PennLinks II**

4. ADDRESS *(Street and No., or RFD No., City, State, and ZIP Code, and Country)*	5. TELEPHONE *(include area code)*	FOR OFFICIAL USE ONLY
PO Box 449 **Hubbard, OR 97032**	**503-263-0719**	PVPO NUMBER 200500061
	6. FAX *(include area code)* **503-263-0703**	FILING DATE Dec 27, 2004

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION
Corporation	**Oregon**	**03 June 1974**

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Melodee Fraser, Ph.D.
PO Box 176
Rolesville, NC 27571

Crystal Rose-Fricker
PO Box 449
Hubbard, OR 97032

FEES RECEIVED
FILING AND EXAMINATION FEES: $ 3652 00
DATE 12/27/04
CERTIFICATION FEE: $
DATE

11. TELEPHONE *(Include area code)*	12. FAX *(Include area code)*	13. E-MAIL
919-556-0146	**919-556-0174**	**mlkfraser@aol.com**

14. CROP KIND *(Common Name)*	16. FAMILY NAME *(Botanical)*
creeping bentgrass	**Gramineae**
15. GENUS & SPECIES NAME OF CROP	17. IS THE VARIETY A FIRST GENERATION HYBRID?
Agrostis stolonifera	**No**

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ☒ NO
IF SO, PLEASE GIVE THE ASIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FC COMMERCIALIZATION.

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☒ Exhibit A. Origin an Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)
☐ YES *(If "yes," answer items 21 and 22 below)* ☒ NO *(If "no," go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES?
☒ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSTION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Melodee L Fraser		Crystal A Fricker	
NAME *(Please print or type)*		NAME *(Please print or type)*	
Melodee L. Fraser		**Crystal A. Rose-Fricker**	
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director of Research - East		**President**	12/15/04

S&T-470 (04-03) designed by the Plant Protection Office using Word 2002. *(See reverse for instructions and information collection burden statement)*

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INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $3,652 ($432 filing fee and $3,220 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more that 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $432 for issuance of the Certificate. Certificates will be issued to owner, not licensee or agent.

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Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

To avoid conflict with other variety names in use, the application must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if **"No"** has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

First U.S. sale 15 July 2004.

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the applicant/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.)*

S&T-470 (04-03) designed by the Plant Protection Office using Word 2002.

Exhibit A

Origin and Breeding History of 'PennLinks II' Creeping Bentgrass

Pure Seed Testing, Inc., Hubbard, OR, developed and released 'PennLinks II' creeping bentgrass. The plants used to begin the breeding project were selected because they were observed to have an endophytic fungus present in their leaf sheath tissue. Endophytic fungi have been demonstrated to convey beneficial characteristics, such as insect resistance, to other turfgrass species.

During the spring of 1994, 28 plants from a spaced-plant nursery of 'PennLinks' parents near Hubbard were observed, by microscopic examination, to have an endophytic fungus present in their leaf sheaths. These 28 plants were selected during the spring of 1994 and transplanted into an isolated crossing block, designated OVC, near Hubbard. The plants were allowed to interpollinate and seed was subsequently harvested individually from each plant. Leaf sheaths from the seedlings were examined microscopically and an endophytic fungus was detected in progeny from all plants in the OVC polycross.

Straw harvested from plants in the OVC polycross was sent to Dr. A.M. Craig's laboratory at the College of Veterinary Medicine at Oregon State University, Corvallis. The samples were analyzed for the presence of ergovaline and lolitrem B, which are alkaloid compounds associated with endophytes in tall fescue and perennial ryegrass. Lolitrem B was detected in all of the samples except one.

Seed harvested from the OVC polycross was used to establish an isolated 2400-plant nursery, near Hubbard, during the fall of 1994. During the spring of 1995, 21 attractive, medium-maturing plants were selected from this nursery. These plants were moved to an isolated polycross, designated OVM, prior to anthesis. The plants were allowed to interpollinate and seed was subsequently harvested from each plant. Seed from this harvest was used to establish an isolated 900-plant nursery near Hubbard during the fall of 1995.

During the spring of 1996, 68 bright green, low-growing, disease-free plants were removed from this nursery and transplanted into an isolated polycross designated OVN. The plants were allowed to interpollinate and seed was subsequently harvested from each plant during the summer of 1996. This seed was used to establish progeny turf evaluation plots in Oregon and New Jersey.

Sixty high-yielding, bright green, disease-free plants from the OVN polycross were divided into 10 propagules each and planted in clonal rows in an isolated spaced-plant nursery near Hubbard during the fall of 1996. Based on progeny turf performance under dollar spot disease pressure in New Jersey, 35 of the clonal rows were removed from the nursery during the spring of 1998, prior to anthesis. The progeny of the remaining 25 clones had shown high resistance to dollar spot. An endophytic fungus was observed in 22 of these 25 clones. The plants in the 25 remaining clonal rows were allowed to interpollinate and the first Breeder seed of PennLinks II was subsequently harvested from 235 plants during the summer of 1998.

Seed propagation of PennLinks II is limited to two generations of increase from Breeder seed: one each of Foundation and Certified. Pure Seed Testing, Inc. maintains Breeder seed in Oregon. PennLinks II has shown stability and uniformity through the Certified seed generation. No off-types or variants have been observed in the reproduction or multiplication of PennLinks II creeping bentgrass. The endophytic fungus observed in the parents of PennLinks II has not been successfully isolated or identified.

Exhibit B
Revised August 2005
Statement of Distinctness for 'PennLinks II' Creeping Bentgrass

'PennLinks II' is most similar to 'PennLinks' creeping bentgrass. They differ in the following characteristics:

1. PennLinks II has a mean mature plant height at least 4.9 cm shorter than PennLinks (Tables 1, 2).
2. PennLinks II has a mean internode length at least 2.6 cm shorter than PennLinks (Tables 1, 2).
3. PennLinks II has a mean subtending leaf length at least 2.2 cm shorter than PennLinks (Tables 1, 3).
4. PennLinks II has a mean flag leaf length at least 1.0 cm shorter than PennLinks (Tables 1, 2).
5. PennLinks II has a mean flag leaf width at least 0.4 mm narrower than PennLinks (Tables 2, 3).
6. PennLinks II has a mean subtending leaf ligule length at least 0.5 mm shorter than PennLinks (Tables 1, 2).
7. PennLinks II has a mean flag leaf ligule length at least 0.5 mm shorter than PennLinks (Tables 1, 2).

PennLinks II can be distinguished from 'Penneagle II' by the following characteristics:

1. PennLinks II has a mean unstraightened plant height at least 3.5 cm shorter than Penneagle II (Tables 17, 18).
2. PennLinks II has a mean flag leaf width at least 0.4 mm narrower than Penneagle II (Tables 17, 19).

Table 1. 2002 mean morphological measurements for entries in a creeping bentgrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Plant Height (cm)	Unstraightened Plant Height (cm)	Panicle Tip to Bottom Branch (cm)	Panicle Length (cm)	Internode Length (cm)	Subtending Leaf Ligule Length (mm)	Flag Leaf Ligule Length (mm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Whorls/ Panicle (#)
PennLinks	61.3	48.0	10.5	33.1	9.7	3.0	2.8	5.6	3.9	7.0
PennLinks II	**56.4**	**41.8**	**9.8**	**34.4**	**7.1**	**2.5**	**2.3**	**4.6**	**3.5**	**8.5**
LSD (0.05)	**2.8**	**2.3**	**0.7**	**1.7**	**0.7**	**0.3**	**0.3**	**0.5**	**0.3**	**0.4**

Table 2. 2003 mean morphological measurements for entries in a creeping bentgrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Plant Height (cm)	Unstraightened Plant Height (cm)	Panicle Tip to Bottom Branch (cm)	Panicle Length (cm)	Internode Length (cm)	Subtending Leaf Length (cm)	Subtending Leaf Ligule Length (mm)	Flag Leaf Ligule Length (mm)	Flag Leaf Length (cm)	Whorls/ Panicle (#)
PennLinks	58.2	55.4	8.5	24.4	10.4	8.1	2.6	2.6	6.0	7.1
PennLinks II	**46.0**	**43.5**	**7.6**	**23.2**	**7.7**	**5.9**	**2.1**	**2.0**	**3.7**	**6.5**
LSD (0.05)	**7.4**	**3.1**	**0.6**	**2.4**	**0.8**	**0.6**	**0.3**	**0.3**	**0.5**	**0.5**

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Exhibit C

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
Bentgrass (*Agrostis* spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
Pure Seed Testing, Inc.	**PST-OVN**	**PennLinks II**

ADDRESS (*Street and No. or RD No., City, State, Zip Code and Country*)
PO Box 449
Hubbard, OR 97032

FOR OFFICIAL USE ONLY

PVPO NUMBER
200500061

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g., 089). Descriptions of the characters should represent those that are typical for the variety. Ranges may be given also. Measured data should be for SPACE PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Append all pertinent comparative trial and evaluation data.

COMPARISON VARIETIES FOR USE BELOW

1 = Astoria 2 = Exeter 3 = Highland 4 = Seaside 5 = Penncross
6 = Kingstown 7 = Astra 8 = Other (Please Specify) **PennLinks**

1. SPECIES:

[2] 1 = Colonial (Browntop) *A. tenuis* 2 = Creeping *A. stolonifera* (*A. palustris*) 3 = Velvet *A. Canina* spp *canina*
4 = Brown Bent *A. canina* spp *montana* 5 = Red Top *A. gigantea*

2. ADAPTATION: (0 = Not Tested, 1 = Not Adapted, 2 = Adapted)

[2] Northeast [2] Southeast [2] North Central [2] Pacific Northwest

[ ] 5 = Other (Specify) _____

3. MATURITY: (At First Anthesis) Use Comparison Varieties

[0][2]	Days Earlier Than.....	[8]	Comparison Variety
	Maturity the Same As	[ ]	Comparison Variety
[ ][ ]	Days Later Than.....	[ ]	Comparison Variety

4. HEIGHT: (Average of Longest 10 Shoots from Soil Surface to Top of Head)

[0][5][6] cm Height (at Maturity)

[0][5]	cm Shorter Than.....	[8]	Comparison Variety
	Height the Same as.....	[ ]	Comparison Variety
[ ][ ]	cm Taller Than	[ ]	Comparison Variety

5. GROWTH HABIT: ***Will send Addendum.***

[ ][ ][ ] % Prostrate [1][0][0] % Decumbent [ ][ ][ ] % Geniculate [ ][ ][ ] % Erect

RAD 8/26/05

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6. VEGETATIVE REPRODUCTION:

Rhizomes: [1] 1 = Absent [ ] 2 = Present

Stolons: [2] 1 = Absent [ ] 2 = Present

[0 0 0] % Rhizomes [1 0 0] % Stolons

2005000611

7. LEAF BLADE:

Color: [5]
1 = Yellowish Green (Cohansey)
2 = Light Green (Washington
3 = Green (Exeter)
4 = Dark Green (Kingstown, Tracenta)
5 = Bluish Green (Highland)
6 = Other (Please Specify) _____

Texture: (Finished) [3]
1 = Very Fine (Kingstown)
2 = Fine (Exeter)
3 = Medium Fine (Astoria)
4 = Medium (Seaside)
5 = Medium Coarse (Virginia)
6 = Coarse (Vermont)

[ ] Stomatal Density of Upper Leaf Surface ***Not Taken***

Lower Surface [1 0 0] % Smooth [ ] % Rough

Upper Surface: [1 0 0] % Smooth [ ] % Rough

Margins: [1 0 0] % Smooth [ ] % Rough

[1 . 9] mm Width (Average of 10) [1 . 7] mm Narrower Than..... [8] Comparison Variety

Width Same as..... [ ] Comparison Variety

[.] mm Wider Than..... [ ] Comparison Variety

[3 . 5] mm Width (Flag Leaves) [4 . 6] cm Length (Flag Leaves)

8. LEAF SHEATH:

Anthocyanin: [1] 1 = Absent 2 = Present [0] % Red Sheaths

9. LIGULE: (Lower and Middle Leaves)

Shape at Apex: [ ] % Acute [ ] % Rounded [1 0 0] % Truncate

[ ] % Other (Please Specify) _____

Pubescence: [1 0 0] % Glabrous [ ] % Pubescent ***Will send Addendum***

Margins: [1 0 0] % Entire [ ] % Toothed

[ ] Other (Please Specify) _____

[2 . 5] mm Length

RAD 8/26/05

10. LEMMA:

Shape: [1 0 0] % Lanceolate [ ] % Ovate

[ ] % Obovate [ ] % Elliptic

[ ] % Oblong [ ] % Other (Please Specify) _____

[0 5] mm Width [1 25] mm Length (Exclusive of awn)

Color: [ ] % Buff [1 0 0] % Silvery

[ ] % Other (Please Specify) _____

Surface: [1 0 0] % Glossy [ ] % Dull

Texture: [1 0 0] % Smooth [ ] % Punctate

Pubescence: [1 0 0] % Glabrous [ ] % Sparce

[ ] % Copious

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10. LEMMA: (continued)

Basal Hairs:	90	% Absent	10	% Few
		% Many		% Short
		% Long		% Apressed
		% Ascending		% Spreading
Awns:	100	% Absent		% Few
		% Many		% Awn-pointed
		% Short		% Long
		% Straight		% Geniculate
Awn Insertion On Lemma:		% Basal		% Middle
		% Distal		

2005000561

11. PANICLE:

Type: (in Anthesis):	100	% Open		% Compact
Anthocyanin:		% Absent	85	% Present
Branches in Anthesis:		% Appressed		% Ascending
	100	% Spreading		
Branches in Fruit:	100	% Appressed		% Ascending
		% Spreading		
Branch Surface:		% Smooth	100	% Scabrous

12. SEED:

0 | 0764 Grams per 1000 seeds

13. SPRING GREEN UP:

2 1 = Early (Exeter) 2 = Medium (Astoria) 3 = Late (Kingstown)

14. ENVIRONMENTAL RESISTANCE: (0=Not Tested 1=Susceptible 2=Partial resistance 3=Tolerant 4=Resistant)

3	Cold	3	Heat	2	Drought	2	Shade	2	Other (Please Specify) **Salinity**

15. DISEASE RESISTANCE: (0=Not Tested 1=Susceptible 2=Partial resistance/tolerant 3=Resistant)

0	Red Leaf Spot (*Drechslera erythrospila*)	2	Helminthosporium Leaf Spot (*Bipolaris sorokiniana*)
0	Melting Out (Drechslera poae (*Helminthosporium vagans*))	3	Dollar Spot (*Sclerotinia homeocarpa*)
2	Pythium Blight (*P. aphanideramatum*)	0	Pythium Blight (*P. ultimum*)
0	Fusarium Blight (*F. roseum*)	0	Fusarium Blight (*F. tricinctum*)
2	Fusarium Patch (Pink Snow Mold (*F. nivale*)	2	Powdery Mildew (*Ersiphe graminis*)
2	Ophiobolus Patch (*O. graminis*)	3	Stripe Smut (*Usilago striiformis*)
3	Copper Spot (*Gloeocercospora sorghi*)	2	Typhula Blight (Snow Scald) (*T. incarnata*)
0	Red Thread (*Corticium fuciforme*)	3	Brown Patch (*Rhizoctonia solani*)
2	Stem Rust (*Puccinia graminis*)	0	Crown Rust (*P. coronata*)
2	Leaf Rust (*P. poae-nemoralis*)	0	Other (Please Specify) _____

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16. INSECT RESISTANCE: (0=Not Tested 1=Susceptible 2=Partial resistance/tolerant 3=Resistant)

0	European Chafer (*Amphimallon solstitalis*)	0	Garden Chafer (*Phyllopertha horticola*)
0	Chinch Bug (*Blissus insularis*)	2	Webworm (*Crambus* spp.)
2	Armyworm (Cutworm) (*Pseudoletia unipuncta*)		Other (Please Specify) _____

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17. GIVE VARIETY(S) THAT MOST CLOSELY RESEMBLE THE SUBITTED VARIETY: For the following characteristics indicate the degree of resemblance (D.R.) with one of the following numbers: 1 = submitted variety is less than, lighter, or inferior to similar variety, 2 = Same as, 3 = More than, darker or superior, etc

CHARACTER	VARIETY		CHARACTER	VARIETY	
Growth Habit	**PennLinks**	1	Leaf Color	**PennLinks**	2
Awn Length	**PennLinks**	2	Panicle Type	**PennLinks**	2
Seed Weight	**PennLinks**	1	Turf Fineness	**PennLinks**	3
Cold Resistance	**PennLinks**	2	Heat Resistance	**PennLinks**	3
Drought Resistance	**PennLinks**	2	Shade Resistance	**PennLinks**	2
Brown Patch	**PennLinks**	3			

18. COMMENTS:

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Exhibit D

Additional Description of 'PennLinks II' Creeping Bentgrass

1. PennLinks II has shown acceptable turf quality in turf trials throughout the USA and Holland (Tables 5-11, 15).
2. PennLinks II has shown moderate to good resistance to dollar spot (Tables 6, 7, 13) and brown patch (Tables 5, 6, 14, 15).

Table 3. 2004 mean morphological measurements for entries in a bentgrass seed yield trial seeded fall of 2003 near Hubbard, OR.

Entry	Subtending Leaf Length (cm)	Flag Leaf Width (mm)
PennLinks	7.5	3.6
PennLinks II	**3.2**	**2.2**
LSD (0.05)	**0.6**	**0.3**

Table 4. Mean initial heading dates for entries in a creeping bentgrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	2002	2003
Independence	08 June	10 June
Providence	07 June	07 June
PennLinks	07 June	07 June
PennLinks II	**04 June**	**06 June**
Seaside II	31 May	02 June
PST-A2E	29 May	02 June
LSD (0.05)	**4 days**	**4 days**

Table 5. 2002 mean winter color, brown patch, copper spot, and turf quality ratings for entries in a bentgrass turf trial seeded fall of 2001 near Rolesville, NC and maintained at 0.130" mowing height.

Entry	Winter Color 30 Jan	Brown Patch 22 Jul	Copper Spot 22 Jul	Turf Quality Apr-Jun	Jul-Sep	Oct-Dec	Mean
PST-OEB	6.3[1]	7.0[2]	6.0[2]	6.8[3]	6.2	5.8	6.3
Penneagle	5.3	6.0	7.3	5.0	4.3	4.3	4.5
PennLinks II	**6.3**	**6.7**	**7.7**	**4.4**	**4.0**	**4.4**	**4.3**
PennLinks	5.7	6.0	7.0	3.9	3.2	4.0	3.7
Penncross	6.0	5.7	8.3	3.6	3.0	4.0	3.5
LSD (0.05)	**1.0**	**1.9**	**1.8**	**1.3**	**1.2**	**1.3**	**0.9**

[1]9 = dark green; [2]9 = no disease; [3]9 = ideal

Table 6. 2003 mean dollar spot, brown patch and turf quality ratings for entries in a creeping bentgrass turf trial seeded fall of 2002 near Rolesville, NC and maintained at 0.5" mowing height.

Entry	Dollar Spot	Brown Patch	Turf Quality Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Mean
PST-ORO	5.2[1]	7.0[1]	5.2[2]	5.7	5.0	2.0	4.5
Penneagle	3.7	6.0	5.0	5.5	4.0	2.0	4.1
PennLinks	5.0	6.0	5.0	5.1	3.7	2.7	4.1
PennLinks II	**7.2**	**5.0**	**4.5**	**5.5**	**4.0**	**2.0**	**4.0**
Penncross	3.7	4.7	5.2	4.7	3.0	2.3	3.8
SR 1119	2.5	8.0	4.7	5.2	2.3	3.0	3.8
LSD (0.05)	**1.4**	**2.4**	**1.1**	**0.8**	**1.4**	**1.5**	**0.6**

[1]9 = no disease; [2]9 = ideal

Table 7. Mean dollar spot, drought stress and turf quality ratings for entries in a bentgrass turf trial seeded fall of 2000 near Rolesville, NC and maintained at 0.5".

Entry	Dollar Spot 23 Jul 01	Drought Stress 15 Jul 02	Turf Quality 2001	2002	Mean
PennLinks II	**5.3**[1]	**3.3**[2]	**4.6**[3]	**4.8**	**4.7**
PennLinks	5.7	2.3	4.2	3.1	3.6
Penneagle	4.3	4.0	4.2	3.0	3.6
Penncross	6.7	1.7	3.8	2.4	3.1
LSD (0.05)	**1.9**	**NS**	**0.5**	**1.4**	**0.7**

[1]9 = no disease; [2]9 = no injury; [3]9 = ideal

Table 8. Mean turf quality ratings for entries in a creeping bentgrass turf trial seeded fall of 2001 near Hubbard, OR and maintained at 0.5" mowing height.

Entry	2002	2003	Mean
PST-OEB	6.0[1]	5.2	5.6
Penncross	4.8	5.3	5.0
PennLinks II	**5.0**	**5.1**	**5.0**
Penneagle	4.7	4.9	4.8
PennLinks	4.7	4.8	4.8
Providence	4.0	4.8	4.4
LSD (0.05)	**0.6**	**0.6**	**0.5**

[1]9 = ideal

Table 9. 2003 mean Pythium blight and turf quality ratings for entries in a creeping bentgrass turf trial seeded fall of 2002 near Hubbard, OR.

Entry	Pythium Blight	Turf Quality Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Mean
PST-OEB	6.7[1]	5.3[2]	6.3	5.7	7.7	6.3
Penneagle	4.7	4.3	5.2	5.7	6.7	5.5
PennLinks II	**5.7**	**4.3**	**5.5**	**5.3**	**7.0**	**5.5**
PennLinks	5.0	4.7	5.2	5.0	6.7	5.4
Penncross	3.7	4.0	5.2	5.3	6.3	5.2
Seaside II	3.3	3.5	4.0	5.3	6.7	4.9
LSD (0.05)	**1.1**	**1.2**	**1.1**	**1.3**	**1.5**	**0.8**

[1]9 = no disease; [2]9 = ideal

Table 10. Mean establishment, winter color and turf quality ratings for entries in a bentgrass turf trial seeded fall of 2002 at den Haan Farm, Bergen op zoom, Holland.

Entry	Establishment 20 Nov 02	Winter Color 18 Feb 03	29 Jan 04	Mean	Turf Quality 15 Jun 03
Penn A-2	9.0[1]	5.0[2]	5.7	5.3	7.3[3]
PennLinks II	**9.0**	**6.3**	**4.0**	**5.2**	**7.0**
PennLinks	9.0	5.0	5.3	5.2	6.0
Penneagle	9.0	5.0	1.7	3.3	5.3
Penncross	9.0	5.7	4.0	4.8	4.7
LSD (0.05)	**1.3**	**1.3**	**1.4**	**1.0**	**1.1**

[1]9 = 100% established; [2]9 = dark green; [3]9 = ideal

TABLE 11. SUMMARY OF TURFGRASS QUALITY RATINGS FOR BENTGRASS CULTIVARS
IN THE 1998 NATIONAL BENTGRASS (FAIRWAY) TEST
1999-2002 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

	ALL LOCATIONS		STATISTICS FOR ALL LOCATIONS				
NAME	MEAN 1/	RANK 2/	SUM OF RANKS 3/	RANK 4/	HIGHEST RANK 5/	LOWEST RANK 6/	MAXIMUM IN TOP 25% 7/
ABT-COL-2	5.4	21	371	20	1	26	8.7
BACKSPIN	5.8	9	284	12	1	25	21.7
BRIGHTON	5.8	11	280	11	4	21	17.4
CENTURY	5.8	10	299	14	1	25	26.1
GLORY	5.6	17	320	16	1	25	30.4
GOLFSTAR	5.0	25	489	25	3	26	8.7
GRAND PRIX	6.0	6	245	7	3	25	34.8
IMPERIAL	5.9	7	256	9	1	26	26.1
L-93	6.1	1	146	1	1	19	56.5
PENN G-6	6.0	3	229	5	1	24	30.4
PENNCROSS	5.7	16	309	15	1	24	17.4
PENNEAGLE	5.6	18	366	19	3	25	13.0
PENNLINKS II	**6.0**	**4**	**199**	**2**	**1**	**22**	**34.8**
PRINCEVILLE	5.8	13	271	10	1	22	17.4
PROVIDENCE	5.7	15	330	17	5	25	13.0
PST-9PM	5.3	23	416	23	2	25	4.3
SEASIDE	4.5	26	537	26	16	26	0.0
SEASIDE II	5.8	12	294	13	4	26	21.7
SR 1119	5.9	8	236	6	3	24	34.8
SR 7100	5.4	22	388	22	1	26	13.0
SR 7150	5.6	19	341	18	1	26	13.0
SRX 1BPAA	6.0	2	213	4	1	26	47.8
SRX 7MOBB	5.4	20	380	21	3	25	17.4
TIGER	5.3	24	456	24	5	26	8.7
TIGER II	5.8	14	251	8	1	23	43.5
TRUELINE	6.0	5	204	3	4	16	43.5
LSD VALUE	0.2						
C.V. (%)	8.5						

*/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

**/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

1/ MEAN - AN AVERAGE OF ALL THE TURFGRASS QUALITY RATINGS FROM ALL LOCATIONS.
2/ RANK - RANKING OF THE MEAN OF ALL QUALITY RATINGS.
3/ SUM OF RANKS - A SUM OF ALL THE RANKINGS FROM THE VARIOUS LOCATIONS.
4/ RANK - THE RANKING OF THE SUM OF RANKS.
5/ HIGHEST RANK - THE HIGHEST RANKING ACHIEVED BY THAT ENTRY AT ANY ONE LOCATION.
6/ LOWEST RANK - THE LOWEST RANKING ACHIEVED BY THAT ENTRY AT ANY ONE LOCATION.
7/ MAXIMUM IN TOP 25% - THE PERCENTAGE OF LOCATIONS WHERE THAT ENTRY FINISHED IN THE TOP 25% OF ALL ENTRIES.

Table 12. 1999-2002 mean pink snow mold ratings of bentgrass cultivars grown in fairway or tee turf trials at three locations.

Entry	UT1	WA1	WA4	Mean
Penn G-6	3.3[1]	5.0	8.7	5.6
PennLinks II	**2.3**	**5.3**	**8.0**	**5.4**
Penneagle	4.7	3.8	8.7	5.2
Penncross	3.7	4.3	8.0	4.7
L-93	3.7	4.5	7.7	4.4
Seaside II	3.0	2.7	6.3	3.4
LSD (0.05)	**2.0**	**3.6**	**1.7**	**2.6**

[1]9 = no disease

Table 13. 1999-2002 mean dollar spot ratings of bentgrass cultivars grown in fairway or tee turf trials at 10 locations.

Entry	IL1	IN1	KS1	MI1	NJ1	PA1	RI1	RI2	VA1	WI1	Mean
L-93	6.0[1]	8.3	7.7	6.8	6.3	7.4	8.0	6.7	5.5	4.5	6.6
PennLinks II	**6.3**	**9.0**	**7.0**	**5.5**	**7.0**	**7.7**	**6.7**	**6.0**	**5.8**	**4.5**	**6.5**
Seaside II	5.3	9.0	7.3	6.7	6.4	7.4	6.7	5.3	5.2	4.3	6.4
Seaside	7.0	9.0	6.0	6.0	6.4	7.6	7.0	3.3	5.2	4.5	6.2
Penncross	3.7	9.0	5.7	6.2	6.3	6.0	7.7	6.0	5.2	4.8	6.1
Penneagle	5.0	7.7	5.7	6.5	5.9	6.7	6.7	4.0	4.8	4.3	5.7
Century	3.3	7.3	4.7	4.8	3.2	4.8	5.7	2.0	3.7	6.0	4.4
LSD (0.05)	**1.4**	**1.7**	**2.5**	**2.0**	**1.6**	**1.3**	**0.8**	**1.0**	**1.6**	**1.5**	**0.8**

[1]9 = no disease

Table 14. 1999-2002 mean brown patch ratings of bentgrass cultivars grown in fairway or tee turf trials at four locations.

Entry	MN1	NJ1	PA1	VA1	Mean
Penncross	8.0[1]	9.0	8.8	8.0	8.5
L-93	8.0	9.0	8.4	7.7	8.2
Penneagle	7.7	9.0	8.3	6.7	7.8
Seaside II	9.0	8.3	8.4	6.3	7.8
PennLinks II	**7.3**	**9.0**	**8.6**	**5.0**	**7.6**
Seaside	8.3	8.2	7.4	6.3	7.2
ABT-COL-2	7.0	3.2	4.8	6.0	4.8
LSD (0.05)	**1.9**	**1.9**	**1.0**	**2.3**	**1.4**

[1]9 = no disease

Table 15. Performance of creeping bentgrass cultivars and selections in a putting green trial seeded in September 2002 at North Brunswick, NJ.

Entry	Turf Quality 2003	Est. Oct 2002	Brown Patch Aug 2003	Wilt Stress Jun 2003	Dollar Spot 2003 Avg	Dollar Spot % Aug 2003
DSB	7.0	5.0	7.0	8.7	6.8	10.7
Declaration	6.8	2.7	7.7	7.7	8.7	3.3
PennLinks II	**5.6**	**6.3**	**5.7**	**6.7**	**7.6**	**5.7**
Penn A-4	4.9	7.0	5.3	5.3	5.6	18.3
Penneagle	4.8	7.3	7.3	7.0	4.9	31.7
Seaside II	4.4	7.3	5.7	6.0	6.4	13.3
Penncross	4.1	7.3	3.7	5.0	6.3	11.7
PennLinks	4.0	6.3	4.7	4.3	6.5	14.7
Kromi	2.2	8.7	3.7	1.7	6.0	18.3
LSD (0.05)	**0.7**	**1.8**	**2.2**	**1.9**	**1.2**	**12.8**

[1]9 = no disease

Table 16. 2003 mean germination rates 14 and 30 days after seeding (DAS) bentgrass entries at 0 or 8000 ppm NaCl in a greenhouse water bath trial in Rolesville, NC.

	14 DAS			30 DAS		
Entry	**% Germ Control**	**% Germ Salt**	**Difference**	**% Germ Control**	**% Germ Salt**	**Difference**
Penn A-1	27	52	25	27	73	46
Penncross	40	19	-21	40	38	-2
PennLinks II	**62**	**35**	**-27**	**71**	**60**	**-11**
Penneagle	51	20	-31	63	36	-27
PennLinks	62	16	-46	72	38	-34
PST-ORAF	66	2	-64	69	26	-43
LSD (0.05)	**22.7**	**21.0**	**27.5**	**28.6**	**18.9**	**32.3**

Table 17. 2005 mean morphological measurements for entries in a bentgrass seed yield trial seeded fall of 2003 near Hubbard, OR.

Entry	Unstraightened Plant Height (cm)	Flag Leaf Width (mm)
Penneagle II	41.7	2.4
PennLinks II	**38.2**	**1.8**
LSD (0.05)	**2.9**	**0.3**

Table 18. 2003 mean unstraightened plant heights for entries in a creeping bentgrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Unstraightened Plant Height (cm)
Penneagle II	49.6
PennLinks II	**43.5**
LSD (0.05)	**3.1**

Table 19. 2002 mean flag leaf widths for entries in a creeping bentgrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Flag Leaf Width (mm)
Penneagle II	3.9
PennLinks II	**3.5**
LSD (0.05)	**0.3**

REPRODUCE LOCALLY. Include form number and date on all reproductions. FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. Information is held confidential until certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Pure Seed Testing, Inc.	**PST-OVN**	**PennLinks II**
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
PO Box 449 **Hubbard, OR 97032**	**503-263-0719**	**503-263-0703**
	7. PVPO NUMBER 200500061	

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. **If no, please explain.** ☒ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or U.S. based company? **If no, give name of country.** ☒ **YES** ☐ **NO**

10. Is the applicant the original owner? ☒ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☐ **YES** ☐ **NO** **If no, give name of country**

b. If original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership. *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):*

Pure Seed Testing, Inc. has licensed PennLinks II to the Penncross Bentgrass Growers Association.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3 If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

STD-470-E (04-03) designed by the Plant Variety Protection Office using Word 2000